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Gapop 10.0 , Gapext 0.5
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                                                               Gossypium hirsutum
Macadamia integrif
Human adipose tiss
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                                                                                                                                                                                                                     Description
            Polypeptide encode Glycine max antimi Soybean beta-congl
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Foetal myelin basi	W06107	17	203	15.2	58	٠.
myelin ba	W00399		197	15.2	58	_
Mouse multiple reg	W19785	18	1244	٠	8	~
Soybean glycinin A	P61362		516		58.5	١٠٠
itilis HP	Y51614	21	306	15.3	58.5	_
O.	R97866		1132		59	
SRY-relat	W03474		395		59	٠
prostate tu	Y74172		157	•	59.5	•
e butyrophi	W78916	19	584		60	~
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3	Y69192	21	1088		60.5	0.
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Coffee storage pro	Y07742	20	492	•	62	١٠
T. gondii immunoge	Y29039	20	611		63	,_
Arabidopsis pathog	W72382	19	155		63	_
Arabidopsis thalia	W72404	19	147	•	63	•
C. acidivorans qam	W58856	19	575		w	w
Pepro TRH protein,	W68538	20	242	•		`
Prepro-thyrotropin	R31229	14	242	•	4.	01
llulose synthas	W73309	19	1039	•	65	٠,
max SBP1 prote	W90339	20	524		65	_
G. max truncated S	W90340	20	444		65	~
trichohya	Y30795	20	1898		65.5	١٠
max SBP2 prote	W90341	20	489		67	_
G. max truncated S	W90342	20	409	•	67	_
metastāsis-	W31867	18	1382	•	67.5	_
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PER A	22	21	1218		70	7
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Sequence encoded b	R20181	13		18.8	72	•

ALIGNMENTS

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W62837 standard; Protein; 637 AA.

W62837;

 $\begin{array}{c} \texttt{CCC} \times \texttt{SX} \times \texttt{SX} \\ \texttt{CCC} \times \texttt{SX} \\ \texttt{CCC} \times \texttt{SX} \times \texttt{CCC} \\ \texttt{CCC} \\ \texttt{CCC} \times \texttt{CCC} \\ \texttt{CCC} \\ \texttt{CCC} \times \texttt{CCC} \\ \texttt{CCC} \times \texttt{CCC} \\ \texttt{C$ The sequence is that of an antimicrobial protein which can be used to control microbial infestations in plants and mammalian ${\sf that}$ Claim 1; Page 60-62; 96pp; English. Novel anti-microbial protein from e.g. Macadamia useful for controlling microbial infestations of WPI; 1998-377279/32. Bower NI, Goulter KC, (RETR-) COOP RES CENT TROPICAL PLANT PATHOLOGY 20-DEC-1996; 22-DEC-1997; 02-JUL-1998. WO9827805-A1 Hordeum vulgare. antimicrobial protein; infestation; control. Hordeum vulgare antimicrobial protein 27-OCT-1998 (first entry) 96AU-0004275 97WO-AU00874 Green JL, Manners JM, Marcus integrifolia plants or mammals JP;

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RESULT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match 30.1%; Score 115; DB 19; Best Local Similarity 37.3%; Pred. No. 3.9e-06; Matches 25; Conservative 12; Mismatches 26;
Key
                                                                                             Macadamia integrifolia
                                                                                                                                                                           antimicrobial protein; infestation; control
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       W62829;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Кеу
                                                                                                                                                                                                                                                                                  Macadamia integrifolia antimicrobial protein
                                                                                                                                                                                                                                                                                                                                                                                27-OCT-1998 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          W62829 standard; Protein; 666
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       The sequence is that of an antimicrobial protein which can be used to control microbial infestations in plants and mammalian
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Claim 1; Page 34-36; 96pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Novel anti-microbial protein from e.g. Macadamia integrifolia -useful for controlling microbial infestations of plants or mammals % \left( 1\right) =\left\{ 1\right\} =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WPI; 1998-377279/32.
N-PSDB; V42310.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     20-DEC-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              22-DEC-1997;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Macadamia integrifolia.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            W62828 standard; Protein; 666 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      241 eegeeeq 247
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (RETR-) COOP RES CENT TROPICAL PLANT PATHOLOGY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   709827805-A1
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    3 DEDDRRG--GHSLQQCVQRCRQERPRYSHARCVQECRDDQQQHGR-HEQEEEQGRGRGWH 59
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Goulter KC,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             666 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 96AU-0004275.
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Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /note= "signal peptide" 29..666
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Location/Qualifiers
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Marcus JP;

Length 666; Indels

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Best Local Similarity
Matches 23; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Novel anti-microbial protein from e.g. Macadamia useful for controlling microbial infestations of
        WPI; 1998-377279/32
                           Bower NI, Goulter KC,
                                                                                   22-DEC-1997;
                                                                                                     02-JUL-1998.
                                                                                                                       WO9827805-A1
                                                                                                                                           Gossypium hirsutum
                                                                                                                                                           antimicrobial protein; infestation; control
                                                                                                                                                                               Gossypium hirsutum antimicrobial protein.
                                                                                                                                                                                                  27-OCT-1998 (first entry)
                                                                                                                                                                                                                                        W62832 standard; Protein; 590 AA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Claim 1; Page 39-41; 96pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WPI; 1998-377279/32.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Bower NI, Goulter KC,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                02-JUL-1998
                                              (RETR-) COOP RES CENT TROPICAL PLANT PATHOLOGY
                                                                 20-DEC-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         N-PSDB; V42311.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Peptide
                                                                                                                                                                                                                                                                                       241 eegeekq 247
                                                                                                                                                                                                                                                                                                                    :||::|
182 eednkrdpggreyedcrrrceggeprggy-gcgrrcreggrghgrggdlinpgrggsgry 240
                                                                                                                                                                                                                                                                                                          60 GEGEREE 66
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                                                                 96AU-0004275
                                                                                   97WO-AU00874.
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                                                                                                                                                                                                                                                                                                                                                                  27.5%; Score 105; DB 19; 34.3%; Pred. No. 6.4e-05; ative 15; Mismatches 25;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    "mature protein"
                           Green JL,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Green JL,
                           Manners JM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Manners JM,
                           Marcus JP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Marcus JP;
                                                                                                                                                                                                                                                                                                                                                                                    Length 666;
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plants or mammals
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\begin{array}{c} \texttt{CCCCCX} \\ \texttt{CCCCCX} \\ \texttt{PXS} \\ \texttt{PXPX} \\ \texttt{PXPX
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Best Local S
Matches 20
                                                                           The sequence is that of an antimicrobial protein which can be used to control microbial infestations in plants and mammalian animals.
                                                                                                                                                                                                                                                                                                                                                                                                                                     WPI; 1998-377279/32.
N-PSDB; V42316.
                                                                                                                                                                                                                                                                                                        Novel anti-microbial protein from e.g. Macadamia integrifolia useful for controlling microbial infestations of plants or mammals \ensuremath{\mathsf{N}}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  The sequence is that of an antimicrobial protein which can be used to control microbial infestations in plants and mainimals.
                                                                                                                                                                                                                                     Claim 1; Page 43-45;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Bower NI, Goulter KC,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         W62830;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Novel anti-microbial protein from e.g. Macadamia integrifolia - useful for controlling microbial infestations of plants or mammals
Sequence
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WO9827805-A1
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (RETR-) COOP RES CENT TROPICAL PLANT PATHOLOGY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        22-DEC-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ::: :: |:| | | | | | : | :|| :|| | | :| | :| | | :| | :| | 114 | eqeqqqsqrqfqecqqhchqqeqrpekkqqcvrecrekyqenpwrgereeeaeeeete-- 171
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     172 -- egeqeq 177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       59 HGEGEREE 66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   3 DEDDRRGGHSLQQCVQRCRQERPR-YSHARCVQECRDDQQQH----GRHEQEEEQGRGRGW 58
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        6
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    625
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      590
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    AA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        97WO-AU00874
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /note= "mature protein"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Location/Qualifiers
                                                                                                                                                                                                                                 96pp; English.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Green JL,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Manners JM,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Marcus
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Query Match

23.8%;

Score 91;

DB 19;

Length 625;

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Matches 22
  B. subtilis rib operon protein
                                                                                                                                                                                                                                                                                                 The invention relates to identification of genes and proteins of adipose tissue relating to obesity, particularly complications of visceral obesity including diabetes, hyperlipemia, hypertension, arteriosclerosis, hyperuricemia and sleep apnea syndrome. The genes (290631-633) and the proteins (Y67598-Y67600) are used in the genetic diagnosis, prevention and treatment of adipose tissue related diseases.
                           10-SEP-1999
                                                                       X21802
                                                                                                                                                                                                                                                                             Sequence
                                                                                                                                                                                                                                                                                                                                                                                  Claim 4; Page
                                                                                                                                                                                                                                                                                                                                                                                                                  A physiologically active protein specifically derived from mammal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Adipose tissue; obesity; diabetes arteriosclerosis; hyperuricemia;
                                                                                                                                                                                                                                                                                                                                                                                                          tissue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (NISB ) JAPAN TOBACCO INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 23-JUL-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      23-JUL-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             08-FEB-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  JP2000037190-A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Human adipose
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      13-JUN-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Y67598;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Y67598 standard; Protein; 699 AA
                                                                                                                                 281
                                                                                                                                                                            242
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                                                                                                                                -egeede 286
                                                                                                                                            GEGEREE 66
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                                                                                                                                                                           egdsrggd--
                                                                                                                                                                                               EDDRRGGHSLQQCVQRCRQERP----RYSHARCVQECRDDQQQHGRHEQEEEQGRGRGWH 59
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  QQCVQRCROBRPRYSHARCVQECRDDQQQHGR-HEQEEEQGRGRGWHGEGEREE
                                                                                                                                                                                                                                                                                                                                                                                                                                                     2000-306578/27
                                                                       standard; Protein; 1856
                                                                                                                                                                                                                      Similarity
22; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Similarity 33.
18; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                           Z90631
                                                                                                                                                                                                                                                                              699
                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (first entry)
                          (first entry)
                                                                                                                                                                                                                                                                                                                                                                               24-27; 50pp; Japanese.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               tissue
                                                                                                                                                                                                                                                                              AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 98JP-0225228
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      98JP-0225228
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           obesity; diabetes; hyperlipemia; hypertension; human;
s; hyperuricemia; sleep apnea syndrome.
                                                                                                                                                                                                                                 19.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              protein
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                                                                                                                                                                                                                                Score 75;
Pred. No.
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3; Mismatches
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                                                                       B
   translated
                                                                                                                                                                                                                      Mismatches
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                                                                                                                                                                                                                                           DB 21; Length 699
  from reading
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                                                                                                                                                                                                                      11;
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   frame
                                                                                                                                                                                                                      26;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2;
   2
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Y83270
  KWWXEXTXXX
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Best Local S
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21-APR-1992;
06-FEB-1995;
24-AUG-1998;
growth disorder;
                     Riboflavin; rib operon; yeast; bacteria;
                                                                                                                                                                                                                                                                                                                                                      providing a recombinant bacterium containing an exogenously introduced bacterial ORF (open reading frame) 3 (or ORF5) structural gene and an exogenous promoter, culturing the bacterium, and recovery of the product. The method is useful for the production of large quantities of riboflavin (vitamin B2). Sequences Y21801-803 are protein sequences translated from three different reading frames of B. subtilis rib operon. Y21804-806 are protein sequences translated from three different reading frames of the
          transcription element; gene expression;
                                              Polypeptide
                                                                    16-AUG-2000
                                                                                            Y83270
                                                                                                                Y83270 standard; Protein;
                                                                                                                                                                                                                                                                                                                        Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WPI; 1999-418271/35
N-PSDB; X81947.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Erdenberger T,
Pero JG, Sloma
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Riboflavin;
vitamin B2;
                                                                                                                                                                                                                                                                                                                                                                                                                                     The invention relates to a method of producing riboflavin that comprises,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Use of bacterial strains for the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    24-AUG-1998;
                                                                                                                                                                                                                                                                                                                                             complementary sequence.
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Example 2; Fig 3A-S; 61pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (HOFF ) ROCHE VITAMINS INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              11-SEP-1990;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          20-JUL-1999
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Bacillus subtilis
                                                                                                                                                                         537
                                                                                                                                                                                                                     477
                                                                                                                                                                                                50 EEQG---
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                                                                                                                                                                        hvrgcktgcsaigentpkhfsrswhsesrgse 568
                                                                                                                                                                                                                                           DDEDDR-----
                                                                                                                                                                                                                  dqhderswhxgkgrhpgrpggeaexkisalyedrpsvrhaksgcqpxrqdsyqhgxqqmd 536
                                                                                                                                                                                                                                                                 21;
                                                                                                                                                                                                                                                                            Similarity
                                                                                                                                                                                                                                                                                                                         1856
                                              encoded
                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       open reading frame;
Bacillus subtilis;
                                                                    (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              90US-0581048.

89US-0370378.

92US-0873572.

95US-0384626.

98US-0138775.
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                                                                                                                                                                                                                                                                                                                         AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Α;
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1..1856
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Hatch RT,
vision;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /note= "residues Xaa
                                                                                                                                                                                                                                          --- RGGHSLQQCVQRCRQERPRYSHARC-VQECRDDQQQHGRHEQE 49
                                             by rib operon of Bacillus subtilis.
                                                                   entry)
                                                                                                                                                                                                                                                                          19.5%;
                                                                                                                                                                                              ----RGRGWHGEGEREE 66
 vision;
                                                                                                                  1856
                                                                                                                                                                                                                                                                10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Hermann
                                                                                                                                                                                                                                                               Score 74.5; D
Pred. No. 1.1;
l0; Mismatches
                                                                                                                  8
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ORF; structural gene;
sight
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    over
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ţ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      are encoded by stop codons"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  production
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Perkins JB;
           hair loss; skin
                       transformation;
                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                               34;
                                                                                                                                                                                                                                                                                     20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    of
                                                                                                                                                                                                                                                                                     Length
                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    riboflavin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   promoter;
           inflammation;
                                                                                                                                                                                                                                                               27;
                                                                                                                                                                                                                                                               Gaps
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by TGA stop	× μ·	FT Misc-difference FT	codon"	stop cc
by TGA stop	\ L.	FT Misc-difference	codon"	stop cc
by TGA stop	·	FT Misc-difference	codon"	stop cc
by TAA stop	-difference 1028 /note= '	Misc	codon"	stop cc
by TGA stop		FT Misc-difference	codon"	stop cc
Encoded by TGA s	1020 /note=	FT Misc-difference	codon"	stop cc
Encoded by TCA stop	1013	FT Misc-difference	codon"	stop cc
Encoded by TAA stop			codon"	stop cc
Encoded by TGA	981 /note=	FT Misc-difference	codon"	stop cc
Encoded by TGA Stop		Misc	codon"	stop co
Encoded by TAA stop	fference 975	FT Misc-dif	codon"	stop cc
Encoded by TGA Stop		Misc	codon"	stop cc
Encoded by TGA Stop		Misc	codon"	stop co
by TAA Stop		Misc-di	codon"	stop co
Encoded by IGA Stop			codon"	stop co
Encoded by TCA stop			codon"	stop co
Encoded by TCA stop			codon"	stop co
Encoded by	Misc-difference 877		codon"	stop co
Encoded by TCA stop			codon"	stop co
Encoded by TAA	Misc-difference 866		codon	stop co
Encoded by TAA stop			codon"	stop co
prodod by mai stop		Mis	codon"	stop co
Encoded by TAA stop		-	codon"	stop co
Encoded by TAA stop		FT Misc-dil	codon"	stop co
Encoded by TGA stop			codon"	stop co
Encoded by TGA stop		FT Misc-dil	codon	stop co
Encoded by TAG Stop		FT Misc-di	codon"	stop co
Encoded by TAA Stop		FT Misc-di	codon"	stop co
Encoded by Tea stop		FT Misc-di	codon"	stop co
Encoded by TCA stop		Misc	codon"	stop co
Encoded by TGA stop	-difference 731	FT Misc-di	codon"	stop co
Encoded by TGA stop	-difference 717	Misc	codon"	stop co
Encoded by TGA stop	Misc-difference 710 /note= "		codon"	stop co
Encoded by TGA stop	Misc-difference 695 /note= "	FT Misc-dii FT	codon"	stop co
"Encoded by TAA stop codon"		FT MISC-Q11		
"Encoded by TGA stop codon"	/note=			
"Encoded by TGA stop codon"	/note=	FT		

Misc-difference

/note= "Encoded by TAA 295 /label= Encoded by 269 /note= "Encoded by TGA 253

Misc-difference Misc-difference

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TGA

Misc-difference Misc-difference Misc-difference

/note= "Encoded 201 /note= "Encoded by 184

by

TGA TGA TAA

/note= "Encoded by TAA 208

/note= Misc-difference 176

Misc-difference

/note= "Encoded by 151

"Encoded by

/note= "Encoded by TAG

Misc-difference 146

/note= "Encoded by TAG Misc-difference 133

Misc-difference

/note= "Encoded by TGA 120

/note= "Encoded by Misc-difference 111

TAA

Misc-difference

Misc-difference

Location/Qualifiers 67

Misc-difference

/note= "Encoded by TAA 92 /note= "Encoded by 91 Bacillus subtilis

/note= "Encoded Misc-difference 344

bу

Misc-difference

/note= "Encoded 358

bу

TGA

/note= "Encoded by 356

/note= "Encoded by TAA 413

Misc-difference

Misc-difference Misc-difference

/note= "Encoded by TGA 331 /note= "Encoded by 324 /note= "Encoded by TGA 323 /note= "Encoded by TAG 298

/note= "Encoded by 341

TAA

/note= "Encoded by Misc-difference 469

/note= "Encoded 486

bу

/note= "Encoded by 501

Misc-difference Misc-difference

Misc-difference

/note= "Encoded by 596"

/note= "Encoded 593

bу

TGA TGA TGA TGA TGA TAA

/note= "Encoded by TAA 632

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/note= "Encoded 532 /note= "Encoded 523

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/note= 586

"Encoded

Misc-difference

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RESULT
W62838
ID W6
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Best Local :
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                                                                     Glycine max antimicrobial protein.
                                                                                                               W62838;
                             Glycine max.
                                                                                                                                                                                                                                                                                                                             /note= "Encoded by TAA stop codon" Misc-difference 1517
                                                                                                                                                                                                                                                                                                                                                 /note= "Encoded by Misc-difference 1334
                                                                                                                                                                                                                                                                                                                                                                      /note= "Encoded by TAA stop codon" Misc-difference 1313
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Misc-difference 1267
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /note= "Encoded by TGA stop codon" Misc-difference 1255
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /note= "Encoded by Misc-difference 1230
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /note= "Encoded by TGA stop codon" Misc-difference 1212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /note= "Encoded by TAA stop codon" Misc-difference 1179
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /note= "Encoded by TGA stop codon" Misc-difference 1172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /note= "Encoded by TGA stop
Misc-difference 1167
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /note= "Encoded by TAA stop codon" Misc-difference 1159
         WO9827805-A1.
                                                 antimicrobial protein; infestation; control.
                                                                                          27-OCT-1998
                                                                                                                                  W62838 standard; Protein; 605 AA
                                                                                                                                                                                                                                                                                                              Misc-difference 1529
                                                                                                                                                                                                                                                                                                                                                                                               Misc-difference 1305
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Misc-difference 1260
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Misc-difference 1130
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Misc-difference
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Misc-difference
                                                                                                                                                                                    537 hvrgcktgcsaigentpkhfsrswhsesrqse 568
                                                                                                                                                                                                                            477 dqhderswhxgkgrhpgrpggeaexkisalyedrpsvrhaksgcqpxrqdsyqhgxqqmd 536
                                                                                                                                                     10
                                                                                                                                                                                                          50 EEQG-----
                                                                                                                                                                                                                                                 2 DDEDDR------RGGHSLQQCVQRCRQERPRYSHARC-VQECRDDQQQHGRHEQE 49
                                                                                                                                                                                                                                                                     (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1143
                                                                                                                                                                                                                                                                                                                                                                                                                  /note= "Encoded by TGA stop codon"
1273
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /note= "Encoded by TAA stop codon"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /note= "Encoded by TGA stop codon"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /note= "Encoded by TGA stop codon"
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                                                                                                                                                                                                                                                                                                                        note= "Encoded by TAA stop codon"
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                                                                                                                                                                                                        -- RGRGWHGEGEREE 66
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                                                                                                                                                                                                                                                                                                                                                               TGA stop codon"
                                                                                                                                                                                                                                                                                                                                                                                                                                               TAA stop codon"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               codon"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               codon"
                                                                                                                                                                                                                                                                     27;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity
Matches 20; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          The sequence is that of an antimicrobial protein which can be used to control microbial infestations in plants and mainimals.
        Disclosure; Fig 33A-B; 193pp; English
                               Tertiary structure of peanut allergen \operatorname{Ara}\ h\ 1 for protection of a host animal from allergic reaction -
                                                                                          Burks W, Helm RM, Cockre
Sampson H, Compadre CM,
                                                                                                                                                     12-MAR-1998;
11-MAR-1999;
                                                                                                                                                                                                                                                                Glycine max.
                                                                                                                                                                                                                                                                                       Peanut; allergen; Ara H 1; IgE; immunoglobulin E; epitope; Ara h allergic reaction; soybean; beta-conglycinin.
                                                                                                                                                                                                                                                                                                                          Soybean beta-conglycinin protein sequence
                                                                                                                                                                                                                                                                                                                                                  06-DEC-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Novel anti-microbial protein from e.g. Macadamia integrifolia useful for controlling microbial infestations of plants or mammals \ensuremath{\mathsf{N}}
                                                                     WPI; 1999-551218/46.
                                                                                                                                                                                        12-MAR-1999;
                                                                                                                                                                                                                  16-SEP-1999
                                                                                                                                                                                                                                        W09945961-A1
                                                                                                                                                                                                                                                                                                                                                                           Y40999;
                                                                                                                                                                                                                                                                                                                                                                                                Y40999 standard; protein; 605
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Claim 1; Page 63-65; 96pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WPI; 1998-377279/32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Bower NI,
                                                                                                                             (UYAR-) UNIV ARKANSAS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (RETR-) COOP RES CENT TROPICAL PLANT PATHOLOGY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            20-DEC-1996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    22-DEC-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          02-JUL-1998.
                                                                                                                                                                                                                                                                                                                                                                                                                                                          |:|| |
97 edeqpr 102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      37 kclqscnserdsyrnqacharcnllkvekeeceegeiprprppppppppppppppgekeed 96
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  49 EEEQGR 54
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               15 QCVQRCRQERPRY----SHARC-----VQEC------RDDQQQHGRHEQ 48
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Goulter KC,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     605 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                  (first entry)
                                                                                                                                                     98US-0077763
99US-0077763
                                                                                                                                                                                        99WO-US05494
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            96AU-0004275
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    97WO-AU00874
                                                                                          Cockrell G,
re CM, Huang
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   19.18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Green JL,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 73; DB 19; Length 605; Pred. No. 0.47; 6; Mismatches 14; Indels
                                                                                                                                                                                                                                                                                                                                                                                                  Ã
                                                                                          Bannon GA, Stanley JS, SK, Maleki SJ, Kopper
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Manners JM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Marcus JP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels 26;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        and mammalian
                                                                                           RA;
                                                                                                    Shin DS;
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W62831
                                    Query Match
Best Local s
Matches 22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local S
Matches 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               allergen designated Ara h 3 and a nucleotide molecule encoding the peanut allergen Ara h 3. Molecules of the invention are used to protect a host animal from allergic reaction, particularly using a modified allergen which is less reactive with IgE. The invention may also be used to ensure that the allergen is not introduced into genetically modified
                                                                                                                                   The sequence is that of an antimicrobial protein which can be used to control microbial infestations in plants and mammalian
                                                                                                                                                                                                 Novel anti-microbial protein from e.g. Macadamia useful for controlling microbial infestations of
                                                                                                                                                                                                                                                                                                                                                                                                                Theobroma cacao
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Theobroma cacao antimicrobial protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         27-OCT-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         W62831 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          The invention provides a tertiary structure for the peanut allergen Ara H 1. The Ara H 1 allergen is found to contain 23 linear IgE-binding epitopes. The invention also provides an isolated recombinant peanut
                                                                                                   Sequence
                                                                                                                           animals
                                                                                                                                                                           Claim 1;
                                                                                                                                                                                                                                        WPI; 1998-377279/32.
                                                                                                                                                                                                                                                                                                                                                                                          WO9827805-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                        antimicrobial protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence
                                                                                                                                                                                                                                                                                      (RETR-) COOP RES CENT TROPICAL PLANT PATHOLOGY.
                                                                                                                                                                                                                                                                                                                 20-DEC-1996;
                                                                                                                                                                                                                                                                                                                                         22-DEC-1997;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         sequence
Local Similarity
nes 22; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              49
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    97 edeqpr 102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   kclqscnserdsyrnqacharcnllkvekeeckkgeiprprprpqhperepqqpgekeed 96
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EEEQGR 54
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             QCVQRCRQERPRY----SHARC-----VQEC------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   The present sequence represents a soybean beta-conglycinin protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ch 19.18;
l Similarity 30.38;
20; Conservative
                                                                                                                                                                           Page 47-49;
                                                                                                   525 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  605 AA;
                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (first entry)
                                                                                                                                                                                                                                                                                                               96AU-0004275
                                                                                                                                                                                                                                                                                                                                       97WO-AU00874.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Protein; 525
                                                                                                                                                                       96pp;
                                                 18.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                         infestation; control.
                                                                                                                                                                                                                                                            Green JL,
                                                                                                                                                                          English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 73;
Pred. No.
                                     Score 72; DB 1
Pred. No. 0.53;
B; Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches
                                                                                                                                                                                                                                                              Manners JM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0.47;
                                                             DB 19;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DB 20; Length 605
                                      23;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      14;
                                                            Length 525
                                                                                                                                                                                                                                                               Marcus
                                                                                                                                                                                                 integrifolia plants or man
                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ----RDDQQQHGRHEQ 48
                                    24;
                                                                                                                                                                                                  mammals
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     26;
              -EEEQG 53
                                     Gaps
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                                     4;
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RESULT
Y76583
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R20181
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                                                                                                                                                                                        Query Match
Best Local
                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                    The inventors claim a 67 kD and 31 kD T. cacao protein, and fragments, and encoding DNAs. The 47 kD and 31 kD proteins are derived from the 67 kD precursor. T. cacao protein cDNA was detected in a cDNA library prepared from immature cocoa beans RNA using a probe based on the AA sequence of a CNBr peptide common to the 47 kD and 31 kD polypeptides. Homology searches revealed close homologies between the 67 kD polypeptide and the vicilins, which are
                                                                                                                                                                                                                                                                                                                                                                                Recombinant cocoa proteins - are responsible beans and produced in large quantities using expression vectors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Cocoa;
                               Y76583 standard; Protein; 156 AA
                                                                                                                                                                                                                                    Sequence
                                                                                                                                                                                                                                                                                                                                                           Claim 4; Fig 2; 59pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                              WPI; 1992-024418/03.
N-PSDB; Q20377.
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Spencer ME,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                07-JUN-1991;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WO9119801-A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Theobroma cacao.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence encoded by 67 kD T. cacao protein cDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         R20181;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            R20181 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (MRSC ) MARS UK LTD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           11-JUN-1990;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  16-APR-1992
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                                                                                                            54
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                                                     14
                                                                                       ehenyhnhkknrseeee 136
                                                                                                           RGRGWH----GEGEREE
                                                                                                                                 egcegrcereykeggrqgeeelgrgyggcggrcgegggggregggcgrkcwegykegerg
                                                                                                                                                                                                                                                        storage proteins.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ehenyhnhkknrseeee
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             eqceqrcereykeqqrqqeeelqrqyqqcqgrcqeqqqqqqqqqqqqcqrkcweqykeqerg 119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      flavour; vicilin;
                                                                                                                                                                            l Similarity 28.6
22; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Hodge R,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           90GB-0013016
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                91WO-GB00914
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                entry)
                                                                                                                                                                                        18.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    136
                                                                                                            66
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Deakin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       seed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              566
                                                                                                                                                                                                                                                                    kD polypeptide and the vicilins, which are
                                                                                                                                                                             θ,
                                                                                                                                                                           Score 72; DB 13;
Pred. No. 0.58;
8; Mismatches 23
                                                                                                                                                                                                                                                                                                                                                                                                                                                              EA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      storage
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ΑA
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ashton
                                                                                                                                                                             23;
                                                                                                                                                                                                                                                                                                                                                                                           for flavour in cocoa
yeast and bacterial
                                                                                                                                                                                                 Length 566;
                                                                                                                                                                             Indels
                                                                                                                                                      --EEEQG
                                                                                                                                                                             24;
                                                                                                                                                                           Gaps
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Y76583;

(first entry)

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RESULT
Y32218
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   DXXXXX
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                                                                                                                                                                                                                                                                                                                                                                                         This invention describes novel nucleic acid (cDNA) sequences (A) which CC have anticancer activity and are highly expressed in ovarian tumor CC tissue (and some also in testis and breast cancer tissue). The products CC of the invention can be used for gene therapy. (A) are used (i) for CC recombinant expression of polypeptides (B) and (ii) to isolate complete GC genes. (B) are used (i) to identify agents suitable for treatment of CC expression from gene therapy vectors) and (ii) for generation of specific antibodies. (A) are identified by assembling ESTs (expressed CC sequence tags) from a particular tissue type before comparison of CC expression patterns. This allows a significantly longer fragment of the CC gene to be revealed, so should reduce the number of failures associated CC with the fact that ESTs from different libraries may represent different CC parts of the same unknown gene, distorting the estimated frequency of CC occurrence in a particular tissue. Y76505-Y76638 represent protein CC fragments encoded by the human ovarian tumor cDNA library derived EST creaments encoded in Z77450-Z77572.
                                                                                                                                                                                                                                                                                                                          Query Match
Best Local 9
                                                                                                                                                                                                                                                                                                           Matches
 Drosophila PER B
                                 15-FEB-2000
                                                                                              Y32218 standard; Protein; 1122 AA
                                                                                                                                                                                                                                                                                                                                                                                         Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Claim 25; Page 276; 310pp; German
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       New nucleic acid sequences expressed in ovarian, and some other, cancer tissues, and derived polypeptides, for treatment of ovarian cancer and identification of therapeutic agents \,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Rosenthal A,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         09-APR-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       09-APR-1998;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Expressed sequence tag; EST; human; ovarian tumor; anticancer;
gene therapy; treatment.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Human ovarian
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (META-) METAGEN GES GENOMFORSCHUNG MBH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        21-OCT-1999
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                                                                                                                                                                            128 qee 130
                                                                                                                                                                                                                                       70 rsgskartpqlfrlqqqlqrfghgcevprcwlqaarehpgqgqeaqseeegegq--egeg 127
                                                                                                                               15
                                                                                                                                                                                                            63 ERE 65
                                                                                                                                                                                                                                                                        7 RRGGHSLQQCVQRCRQERPRYSHA----RCVQECRDDQQQHGRHEQEEEQGRGRGWHGEG 62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  therapy;
                                                                                                                                                                                                                                                                                                           18; Conserv
                                                                                                                                                                                                                                                                                                                                                                                         156 AA;
                             (first entry)
                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Specht T,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                tumor EST fragment encoded protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       98DE-1017557
protein.
                                                                                                                                                                                                                                                                                                                          18.3%;
28.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Hinzmann B,
                                                                                                                                                                                                                                                                                                       Score 70; DB 2:
Pred. No. 0.24;
il; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Schmitt A,
                                                                                                                                                                                                                                                                                                                                       DB 20; Length 156
                                                                                                                                                                                                                                                                                                           28;
                                                                                                                                                                                                                                                                                                         Indels
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                                                                                                                                             This sequence represents the Drosophila melanogaster PER protein PER B. Splice variants are PER A (see Y32217) and PER C (see Y32219). PER forms a heteromeric complex together with TIM (see Y32221) protein and has a biological activity which inhibits transcription of the perl gene when the CLOCK protein is present in combination with BMALI protein (see Y32209). The invention is based on the discovery of the transcriptional mechanism regulating genes responsible for the establishment and/or maintenance of the circadian clock, and provides an assay for novel drugs aimed at restoration of a normal circadian cycle, the drugs being modulators of BMALI-CLOCK-mediated transcription of E-box-linked genes. The drugs are used to treat conditions such as jet lag, sleep discorders, invention also provides BMALI and CLOCK proteins with which to stimulate the transcription of an E-box-linked gene which regulates the circadian clock.
                                                                             Query Match
Best Local Similarity
                                                                Matches
                                                                                                                                        Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Novel heterodimeric composition for identifying modulators used in diagnosing and treating circadian clock disruption disorders
                                                                                                                                                                                                                                                                                                                                                                                                                                    Disclosure; Fig 31; 96pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WPI; 2000-052938/04
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           07-MAY-1998;
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CJ,
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                                                                                                                                           1122 AA;
                                                                Conservative
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36.2%;
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